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ABSTRACT

Teachers' beliefs and the effects of these beliefs on instructional practices have become significant areas of research on teaching. The purpose of this study was to compare the beliefs of elementary and secondary teachers with respect to testing and grading and to identify factors that discriminate between the two groups of teachers. The sample consisted of 226 elementary school teachers and 117 secondary school teachers who completed questionnaires providing information about their views on the nature and dimensions of intelligence, educational goals, and beliefs about testing and grading. Results suggest that elementary teachers can be distinguished from secondary school teachers in the following ways: elementary teachers were more positive about the use of tests, but more negative in rating themselves as test-takers; they were more positive about social aspects of intelligence and subjective grading; they placed higher importance on tests and the social dimensions of intelligence; they rated themselves higher on social adaptiveness and social goals for education; and they valued subjective assessments more than did their secondary school counterparts. (LL)

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Elementary and Secondary Teacher's Beliefs about Testing and Grading

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RUNNING HEAD: Beliefs about Tests

Paper presented at the 99th Annual Meeting of the American Psychological Association, San Francisco, CA. 1991

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ABSTRACT

The purpose of this study was to compare the beliefs of elementary and secondary teachers about testing and grading and identify factors the discriminate between the two groups of teachers. 554 teachers (266 elementary, 117 secondary) participated. Teachers provided information about their view about the nature and dimensions of intelligence, their educational goals, and their beliefs about testing and grading. Elementary teachers valued tests more, rated their ability as test-takers low, valued the social dimension of intelligence, rated themselves higher on social adaptiveness, thought social goals for educational were important, and valued subjective assessments more than secondary school teachers.

Objective

Teachers' beliefs and the effects of these beliefs on instructional practices have become significant areas of research on teaching. The purpose of this study was to compare the beliefs of elementary and secondary teachers about testing and grading and identify factors that discriminate between the two groups of teachers.

Theoretical Framework

Testing and grading have always been concerns for teachers, but lately, with the advent of high school proficiency testing, calls for accountability, pressures to test teachers, and debates over the validity of test results, concerns about these issues have increased for many. In the last five years, two issues of Educational Leadership have been devoted to the "testing problem." Calls for alternatives to traditional tests and grading fill the professional literature (cf. Crooks, 1988; Shepard, 1989). With a few exceptions, however, there is little research on teachers' attitudes and beliefs about these activities (Manke & Loyd, 1990; Ruddell, 1985). The results of Ruddell's work indicate that teachers have little understanding of measurement concepts and rely most heavily on informal observations, not standardized test results to make instructional decisions. These conclusions, however, were based on a sample of only 18 elementary teachers. Using a larger sample of elementary and secondary teachers, Manke and Loyd found that the grades teachers assign are affected by 7 non-achievement factors including the teacher's grade level and the student's gender, effort, improvement, behavior, personality, and work completion. Research by Dweck (1986) suggests that teachers' implicit theories about the nature of intelligence may also influence their beliefs regarding testing and grading.

Method

Participants

A national sample of 1000 elementary and secondary teachers, randomly selected from a larger list prepared by a marketing organization to be representative of the teachers in the Continental United States, was contacted to participate in this study. A total of 554 (55%) returned questionnaires. After eliminating responses from individuals who were

currently in administration or special education, the remaining sample consisted of 266 elementary teachers and 117 secondary teachers. Participation was anonymous and voluntary.

Procedure

Teachers were sent a questionnaire to return by mail. They provided demographic information and completed the four questionnaires described below.

Dimensions of intelligence. The first questionnaire was developed in a pilot study using Sternberg's (1981) procedures. Participants were asked to rate 36 behaviors such as "well read," "reasoning skills," "thoughtful," "desire to learn more," "common sense," on a 9-point Likert scale, indicating how characteristic each behavior is of the "ideally intelligent person." The instrument yields 2 scales labeled "Abstract Thinking" (alpha = .82) and "Practical Intelligence" (alpha= .95).

Nature of Intelligence. The second questionnaire , 11- item force-choice instrument, is designed to differentiate between teachers who view intelligence as a fixed trait (entity) and those who view intelligence as a modifiable characteristic (incremental) (Dweck & Bempechat, 1983). Because forced choice scales tend to have lower reliabilities, the alpha for this scale (.61) was deemed acceptable.

Educational goals. The 12-item educational goals questionnaire was designed to reflect 3 dimensions of intelligence: concrete knowledge (e.g., the goal of "academic mastery in the basic skills"), abstract thinking (e.g., "developing abstract reasoning ability"), and social adaptiveness (e.g., "fostering cooperation"). Participants were asked to rate each goal from least to most important. The reliabilities for the 3 goal scales were .66 (Concrete Knowledge), .73 (Abstract Thinking), and .75 (Social Adaptiveness).

Beliefs about testing and grading. Teachers were asked to indicate the basis of their grading (objective achievement vs. performance in relation to ability); rate the accuracy and usefulness of IQ tests, standardized tests, mid-term or final examinations, class quizzes, written assignments, and teacher judgments; rate their own test-taking ability and intelligence (concrete knowledge, abstract thinking, social adaptiveness); and rate 6 different teacher- and student-based reasons why students fail.

Results

A direct method discriminant analysis was used to test the efficiency of the variables described previously in distinguishing between elementary and secondary level teachers. Variables that met the minimum criterion for entry were included in the analysis. Thirty cases were eliminated from the analysis as a consequence of not having data on at least one of the entering variables. Wilk's Lambda was used as the criterion statistic in the analysis. Prior probabilities of elementary and secondary level teachers were .70 and .30 respectively. One statistically significant discriminant function was identified with a canonical correlation of .26. The chi square was 24.97 (df=9), $p < .01$. The pooled within-groups correlations between discriminating variables and canonical discriminant functions are presented in Table 1. Group means on the predictor variables are presented in Table 2. The standardized group means on the discriminant function were .18 and -.42 for elementary and secondary teachers respectively. The discriminant function is best described by strong positive loadings on variables related to the perceived value of standardized tests and the desirability of educational goals related to abstract thinking. The discriminant function is also characterized by a strong negative loading on a variable that involves a judgment of how good the respondent is at tests. 97% of the elementary teachers were correctly classified using the derived function. Only 15% of the secondary teachers were correctly classified.

Discussion

Elementary teachers can be distinguished from secondary school teachers on the basis of responses to a battery of variables related to valued aspects of intelligence and beliefs about testing and grading. Elementary school teachers were generally more positive about the use of tests than were their secondary school counterparts. In addition, elementary school teachers were more negative in their evaluations of themselves as test-takers. Elementary teachers were also more positive about the social aspects of intelligence and subjective grading. The difference in the beliefs of the two groups of teachers about their own abilities as test-takers is interesting, especially as it anchors the

discriminant analysis in this case. The results show that there are discernible differences between elementary and secondary teachers in their beliefs about testing and grading. However, although the discriminant function was statistically significant, relatively little of the variation in responses was accounted for by the variables at hand.

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Table 1

Results of Discriminant Function Analysis of Testing/Grading Variables

Predictor Variables	Correlations of predictor variables with discriminant function	Univ F(1, 351)
Abstract IQ	0.21	1.2
Practical IQ	0.36	3.4
Classroom Tests	0.14	0.5
Teacher Subjectivity	0.38	3.8
Standardized Tests	0.43	5.0
Educational Goal./Abstract	0.61	9.6
Educational Goal/Concrete	0.05	0.5
Educational Goal/Social	0.29	2.1
Good at Tests	-0.61	8.1

Table 2

Group Means on Variables used in Discriminant Function Analysis

Predictor Variables	Teachers	
	Elementary	Secondary
Abstract IQ	7.7	.7.6
Practical IQ	6.1	5.8
Classroom Tests	7.1	7.0
Teacher Subjectivity	7.3	7.0
Standardized Tests	5.9	5.5
Educational Goal./Abstract	7.5	7.2
Educational Goal/Concrete	6.5	6.5
Educational Goal/Social	7.5	7.3
Good at Tests	6.5	7.0